



1 MITHGCYTRT RHKHKLKKTL IMLSAGLGLF FYVNQNSFAN GENYFKLGSD
51 SKLLTHDSYQ NRLFYTLKTG ETVADLSKSQ DINLSTIWSL NKHLYSSESE
101 MMKAAPGQOI ILPLKKLPFE YSALPLLGSA PLVAAGGVAG HTNKLTKMSP
151 DVTKSNMTDD KALNYAAQA ASLGSQLQSR SLNGDYAKDT ALGIAGNQAS
201 SQLQAWLQHY GTAEVNLQSG DNFDGSSSLDF LLPFYDSEKM LAFGQVGARY
251 IDSRFTANLG AGQRFFLPAN MLGYNVFIDQ DFSGDNTRLG IGGEYWRDYF
301 KSSVNGYFRM RRWHESYHKK DYDERPANGF DIRFNGYLPS YPALGAKLIY
351 EQYYGDNVAL FNSDKLQSNP GAATVGVNYT PIPLVTMGID YRHGTGNEND
401 LLYSMQFRYQ FDKSWSQQIE PQYVNELRTL SGSRYDLVQR NNNIILEYKK
451 QDILSLNIPH DINGTEHSTQ KIQLVKSKY GLDRIVWDDS ALRSQGGQIQ
501 HSGSQAQDY QAILPAYVQG GSNIYKV TAR AYDRNGNSSN NVQLTITVLS
551 NGQVVDQGV TDFTADK TSA KADNADTITY TATVKKNGVA QANVPVSFNI
601 VSGTATLGAN SAKTDANGKA TVTLKSSTPG QVVVSAKTAE MSSALNASAV
651 IFFDQTKASI TEIKADKTTA VANGKDAIKY TVKVMKNGQP VNNQSVTFST
701 NFGMFNGKSQ TQATTGNDGR ATITLTSSSA GKATVSATVS DGAEVKATEV
751 TFFDELKIDN KVDIIGNNVR GELPNIWLQY GQFKLKASGG DGTYSWYSEN
801 TSIATVDASG KVTLNGKGSV VIKATSGDKQ TVSYTIKAPS YMIKVDKQAY
851 YADAMSICKN LLPSTQTVLS DIYDSWGAAN KYSHYSSMNS ITAWIKQTSS
901 EQRSGVSSTY NLITQNPLPG VNVNTPNVYA VCVE SEQ ID NO:19

1	TCGAGAATGA	AATAGAAGTC	GTTGTTAAGT	CAATGGAAAA	CCTGTATTTG	GTATTACATA
61	ATCAGGGAAT	AACATTAGAA	AACGAACATA	TGAAAATAGA	GGAAATCAGT	TCAAGCGACA
121	ATAAACATTA	TTACGCCGGA	AGATAAAATC	CGATCTATTA	ATATAATTTA	TTTCTCATTC
181	TAACCTCATTG	TGGTGGAGCC	ATAACATGAT	TACTCATGGT	TGTTATACCC	GGACCCGGCA
241	CAAGCATAAG	CTAAAAAATA	CATTGATTAT	GCTTAGTGCT	GGTTTAGGAT	TGTTTTTTTA
301	TGTTAATCAG	AATTCATTTG	CAAATGGTGA	AAATTATTTT	AAATTGGGTT	CGGATTCAAA
361	ACTGTAACT	CATGATAGCT	ATCAGAATCG	CCTTTTTTAT	ACGTTGAAAA	CTGGTGAAAC
421	TGTTGCCGAT	CTTTCTAAAT	CGCAAGATAT	TAATTTATCG	ACGATTGGGT	CGTTGAATAA
481	GCATTTATAC	AGTTCTGAAA	GCGAAATGAT	GAAGGCCGCG	CCTGGTCAGC	AGATCATTTT
541	GCCACTCAAA	AAACTTCCCT	TTGAATACAG	TGCACTACCA	CTTTTAGGTT	CGGCACCTCT
601	TGTTGCTGCA	GGTGGTGTG	CTGGTCACAC	GAATAAACTG	ACTAAAATGT	CCCCGGACGT
661	GACCAAAAGC	AACATGACCG	ATGACAAGGC	ATTAAATTAT	GCGGCACAAC	AGGCGGCGAG
721	TCTCGGTAGC	CAGCTTCAGT	CGCGATCTCT	GAACGGCGAT	TACGCGAAAG	ATACCGCTCT
781	TGGTATCGCT	GGTAACCAGG	CTTCGTCACA	GTTGCAGGCC	TGGTTACAAC	ATTATGGAAC
841	GGCAGAGGTT	AATCTGCAGA	GTGGTAATAA	CTTTGACGGT	AGTTCCTGG	ACTTCTTATT
901	ACCGTTCTAT	GATTCCGAAA	AAATGCTGGC	ATTTGGTCAG	GTCCGGAGCGC	GTTACATTGA
961	CTCCCGCTTT	ACGGCAAATT	TAGGTGCGGG	TCAGCGTTTT	TTCCTTCCTG	CAAACATGTT
1021	GGGCTATAAC	GTCTTCATTG	ATCAGGATTT	TTCTGGTGAT	AATACCCGTT	TAGGTATTGG
1081	TGGCGAATAC	TGGCGAGACT	ATTTCAAAAG	TAGCGTTAAC	GGCTATTTCC	GCATGAGCGG
1141	CTGGCATGAG	TCATACAATA	AGAAAGACTA	TGATGAGCGC	CCAGCAAATG	GCTTCGATAT
1201	CCGTTTTAAT	GGCTATCTAC	CGTCATATCC	GGCATTAGGC	GCCAAGCTGA	TATATGAGCA
1261	GTATTATGGT	GATAATGTTG	CTTTGTTTAA	TTCTGATAAG	CTGCAGTCGA	ATCCTGGTGC
1321	GGCGACCGTT	GGTGTAAGCT	ATACTCCGAT	TCCTCTGGTG	ACGATGGGGA	TCGATTACCG
1381	TCATGGTACG	GGTAATGAAA	ATGATCTCCT	TTACTCAATG	CAGTTCGGTT	ATCAGTTTGA
1441	TAAATCGTGG	TCTCAGCAAA	TTGAACCACA	GATAGTTAAC	GAGTTAAGAA	CATTATCAGG
1501	CAGCCGTTAC	GATCTGGTTC	AGCGTAATAA	CAATATTATT	CTGGAGTACA	AGAAGCAGGA
1561	TATTCTTTCT	CTGAATATTC	CGCATGATAT	TAATGGTACT	GAACACAGTA	CGCAGAAGAT
1621	TCAGTTGATC	GTTAAGAGCA	AATACGGTCT	GGATCGTATC	GTCTGGGATG	ATAGTGCATT
1681	ACGCAGTCAG	GGCGGTCAGA	TTCAGCATAG	CGGAAGCCAA	AGCGCACAA	ACTACCAGGC
1741	TATTTTGCCT	GCTTATGTGC	AAGGTGGCAG	CAATATTTAT	AAAGTGACGG	CTCGCGCCTA
1801	TGACCGTAAT	GGCAATAGCT	CTAACAATGT	ACAGCTTACT	ATTACCGTTC	TGTCGAATGG
1861	TCAAGTTGTC	GACCAGGTTG	GGGTAACGGA	CTTTACGGCG	GATAAGACTT	CGGCTAAAGC
1921	GGATAACGCC	GATACCATTA	CTTATACCGC	GACGGTGAAA	AAGAATGGGG	TAGCTCAGGC
1981	TAATGTCCCT	GTTTCATTTA	ATATTGTTTC	AGGAACTGCA	ACTCTTGGGG	CAAATAGTGC
2041	CAAAACGGAT	GCTAACGGTA	AGGCAACCGT	AACGTTGAAG	TCGAGTACGC	CAGGACAGGT
2101	CGTCGTGTCT	GCTAAAACCG	CGGAGATGAC	TTCAGCACTT	AATGCCAGTG	CGGTTATATT
2161	TTTTGATCAA	ACCAAGGCCA	GCATTACTGA	GATTAAGGCT	GATAAGACAA	CTGCAGTAGC
2221	AAATGGTAAG	GATGCTATTA	AATATACTGT	AAAAGTTATG	AAAAACGGTC	AGCCAGTTAA
2281	TAATCAATCC	GTTACATTCT	CAACAACTT	TGGGATGTTT	AACGGTAAGT	CTCAAACGCA
2341	AGCAACCACG	GGAAATGATG	GTCGTGCGAC	GATAACACTA	ACTTCCAGTT	CCGCCGGTAA
2401	AGCGACTGTT	AGTGCGACAG	TCAGTGATGG	GGCTGAGGTT	AAAGCGACTG	AGGTCACTTT
2461	TTTTGATGAA	CTGAAAATTG	ACAACAAGGT	TGATATTATT	GGTAACAATG	TCAAGAGGTC
2521	GATGTTGCCT	AATATTTGGC	TGCAATATGG	TCAGTTTAAA	CTGAAAGCAA	GCGGTGGTGA
2581	TGGTACATAT	TCATGGTATT	CAGAAAATAC	CAGTATCGCG	ACTGTGCGATG	CATCAGGGAA
2641	AGTCACTTTG	AATGGTAAAG	GCAGTGTCGT	AATTAAAGCC	ACATCTGGTG	ATAAGCAAAC
2701	AGTAAGTTAC	ACTATAAAAG	CACCGTCGTA	TATGATAAAA	GTGGATAAGC	AAGCCTATTA
2761	TGCTGATGCT	ATGTCCATTT	GCAAAAATTT	ATTACCATCC	ACACAGACGG	TATTGTCAGA
2821	TATTTATGAC	TCATGGGGGG	CTGCAAATAA	ATATAGCCAT	TATAGTTCTA	TGAACTCAAT
2881	AACTGCTTGG	ATTAAACAGA	CATCTAGTGA	GCAGCGTTCT	GGAGTATCAA	GCACTTATAA
2941	CCTAATAACA	CAAAACCTTC	TTCCTGGGGT	TAATGTTAAT	ACTCCAAATG	TCTATGCGGT
3001	TTGTGTAGAA	TAATTCCATA	ACCACCCCGG	CTAAAATATG	TATTGTTTTA	GTCGGGGCAT
3061	AATTATTTCT	TCTTAAGAAA	TAACCCTCTT	ATAATCAAAT	CTACTACTGG	TCTTTTTATC
3121	TGCTTAATAG	G	SEQ ID NO: 20			

1	GGAAAGATAA	ATCCGATCTA	TTAATATAAT	TTATTTCTCA	TTCTAACTCA	TTGTGGTGGA
61	GCCATAACAT	GAGTACTCAT	GGTTGTTATA	CCCGGACCCG	GCACAAGCAT	AAGCTAAAAA
121	AAACATTGAT	TATGCTTAGT	GCTGGTTTAG	GATTGTTTTT	TTATGTTAAT	CAGAATTCAT
181	TTGCAAATGG	TGAAAATTAT	TTTAAATTGG	GTTCCGGATTC	AAAACGTGTA	ACTCATGATA
241	GCTATCAGAA	TCGCCTTTTT	TATACGTTGA	AAACTGGTGA	AACTGTTGCC	GATCTTTCTA
301	AATCGCAAGA	TATTAATTTA	TCGACGATTT	GGTCGTTGAA	TAAGCATTTA	TACAGTTCGT
361	AAAGCGAAAT	GATGAAGGCC	GCGCCTGGTC	AGCAGATCAT	TTTGCCACTC	AAAAAACTTC
421	CCTTTGAATA	CAGTGCAC TA	CCACTTTTAG	GTTCCGGCACC	TCTTGTTGCT	GCAGGTGGTG
481	TTGCTGGTCA	CACGAATAAA	CTGACTAAAA	TGTCCCCGGA	CGTGACCAAA	AGCAACATGA
541	CCGATGACAA	GGCATTAAAT	TATGCGGCAC	AACAGGCGGC	GAGTCTCGGT	AGCCAGCTTC
601	AGTCGCGATC	TCTGAACGGC	GATTACGCGA	AAGATACCGC	TCTTGGTATC	GCTGGTAACC
661	AGGCTTCGTC	ACAGTTGCAG	GCCTGGTTAC	AACATTATGG	AACGGCAGAG	GTTAATCTGC
721	AGAGTGGTGA	TAACTTTGAC	GGTAGTTCAC	TGGACTTCTT	ATTACCGTTC	TATGATTCCG
781	AAAAAATGCT	GGCATTTGGT	CAGGTCGGAG	CGCGTTACAT	TGACTCCCGC	TTTACGGCAA
841	ATTTAGGTGC	GGGTCAGCGT	TTTTTCCTTC	CTGCAAACAT	GTTGGGCTAT	AACGTCTTCA
901	TTGATCAGGA	TTTTTCTGGT	GATAATACCC	GTTTAGGTAT	TGGTGGCGAA	TACTGGCGAG
961	ACTATTTCAA	AAGTAGCGTT	AACGGCTATT	TCCGCATGAG	GCGCTGGCAT	GAGTCATACC
1021	ATAAGAAAGA	CTATGATGAG	CGCCCAGCAA	ATGGCTTCGA	TATCCGTTTT	AATGGCTATC
1081	TACCGTCATA	TCCGGCATT A	GGCGCCAAGC	TGATATATGA	GCAGTATTAT	GGTGATAATG
1141	TTGCTTTGTT	TAATTCTGAT	AAGCTGCAGT	CGAATCCTGG	TGCGGCGACC	GTTGGTGTAA
1201	ACTATACTCC	GATTCTCTCTG	GTGACGATGG	GGATCGATTA	CCGTCATGGT	ACGGGTAATG
1261	AAAATGATCT	CCTTTACTCA	ATGCAGTTCC	GTTATCAGTT	TGATAAATCG	TGGTCTCAGC
1321	AAATTGAACC	ACAGTATGTT	AACGAGTTAA	GAACATTATC	AGGCAGCCGT	TACGATCTGG
1381	TTCAGCGTAA	TAACAAATATT	ATTCTGGAGT	ACAAGAAGCA	GGATATTCTT	TCTCTGAATA
1441	TTCCGCATGA	TATTAATGGT	ACTGAACACA	GTACGCAGAA	GATTCAGTTG	ATCGTTAAGA
1501	GCAAATACGG	TCTGGATCGT	ATCGTCTGGG	ATGATAGTGC	ATTACGCAGT	CAGGGCGGTC
1561	AGATTCAGCA	TAGCGGAAGC	CAAAGCGCAC	AAGACTACCA	GGCTATTTTG	CCTGCTTATG
1621	TGCAAGGTGG	CAGCAATATT	TATAAAGTGA	CGGCTCGCGC	CTATGACCGT	AATGGCAATA
1681	GCTCTAACAA	TGTACAGCTT	ACTATTACCG	TTCTGTGCGA	TGGTCAAGTT	GTCGACCAGG
1741	TTGGGGTAA C	GGACTTTACG	GCGGATAAGA	CTTCGGCTAA	AGCGGATAAC	GCCGATACCA
1801	TTACTTATAC	CGCGACGGTG	AAAAAGAATG	GGGTAGCTCA	GGCTAATGTC	CCTGTTTCAT
1861	TTAATATTGT	TTCAGGAACT	GCAACTCTTG	GGGCAAATAG	TGCCAAAACG	GATGCTAACG
1921	GTAAGGCAAC	CGTAACGTTG	AAGTCGAGTA	CGCCAGGACA	GGTCGTCGTG	TCTGCTAAAA
1981	CCGCGGAGAT	GAGTTCAGCA	CTTAATGCCA	GTGCGGTTAT	ATTTTTTGAT	CAAACCAAGG
2041	CCAGCATTAC	TGAGATTAAG	GCTGATAAGA	CAACTGCAGT	AGCAAATGGT	AAGGATGCTA
2101	TTAAATATAC	TGTAAAAGTT	ATGAAAAACG	GTCAGCCAGT	TAATAATCAA	TCCGTTACAT
2161	TCTCAACAAA	CTTTGGGATG	TTCAACGGTA	AGTCTCAAAC	GCAAGCAACC	ACGGGAAATG
2221	ATGGTTCGTGC	GACGATAACA	CTAACTTCCA	GTTCCGCCGG	TAAAGCGACT	GTTAGTCCGA
2281	CAGTCAGTGA	TGGGGCTGAG	GTTAAAGCGA	CTGAGGTCAC	TTTTTTTTGAT	GAAGTAAAAA
2341	TTGACAACAA	GGTTGATATT	ATTGGTAACA	ATGTCAGAGG	CGAGTTGCCT	AATATTTGGC
2401	TGCAATATGG	TCAGTTTAAA	CTGAAAGCAA	GCGGTGGTGA	TGGTACATAT	TCATGGTATT
2461	CAGAAAATAC	CAGTATCGCG	ACTGTCGATG	CATCAGGGAA	AGTCACTTTG	AATGGTAAAG
2521	GCAGTGTCTG	AATTAAAGCC	ACATCTGGTG	ATAAGCAAAC	AGTAAGTTAC	ACTATAAAAG
2581	CACCGTCGTA	TATGATAAAA	GTGGATAAGC	AAGCCTATTA	TGCTGATGCT	ATGTCCATTT
2641	GCAAAAATTT	ATTACCATCC	ACACAGACGG	TATTGTCAGA	TATTTATGAC	TCATGGGGGG
2701	CTGCAAATAA	ATATAGCCAT	TATAGTTCTA	TGAACTCAAT	AACTGCTTGG	ATTAAACAGA
2761	CATCTAGTGA	GCAGCGTTCT	GGAGTATCAA	GCACTTATAA	CCTAATAACA	CAAAACCCTC
2821	TTCTCTGGGGT	TAATGTTAAT	ACTCCAAATG	TCTATGCGGT	TTGTGTAGAA	TAATTCCATA
2881	ACCACCCCGG	CTAAAATATG	TATTGTTTTA	GTCGGGGCAT	AATTATTTCT	TCTTAAGAAA
2941	TAACCTCTTA	TAATCAAATC	TACTACTGGT	CTTTTTATCT	GCTTAATAGG	TCTCTTTCAA
3001	AGAGACACAT	TCACGTTTTC	TAGAGTAGGT	TGATCCAACC	ACGCTGTATA	CCAAAGCTGA
3061	ATCACATCAA	GCAACAAC TA	TGCTCACAAC	ATCCACACAA	TAAAAA	SCQ ID NO: 2/

FIGURE 4

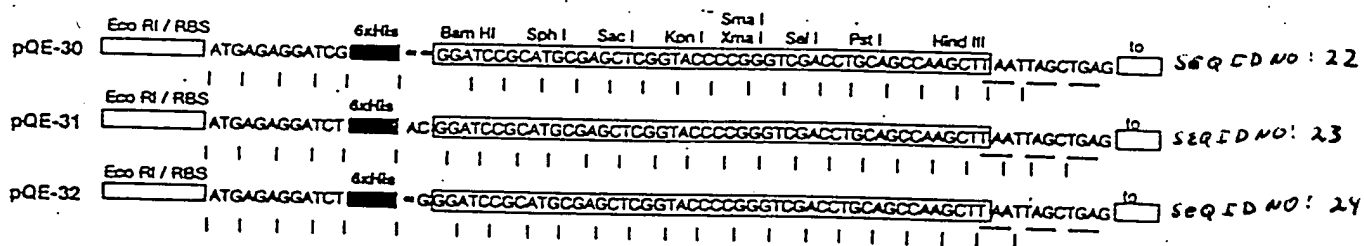
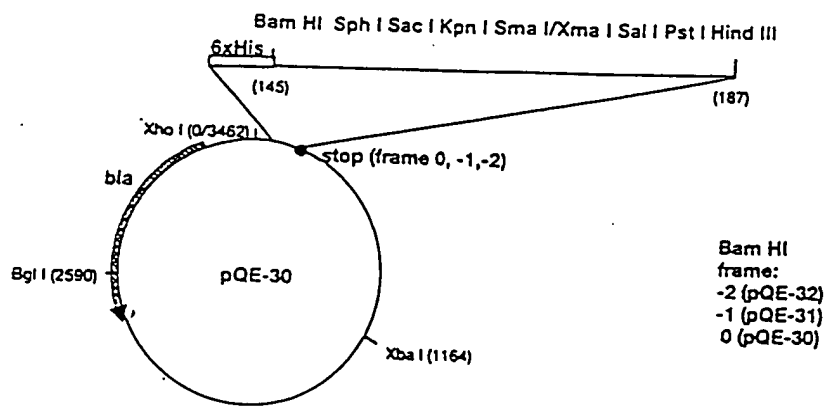
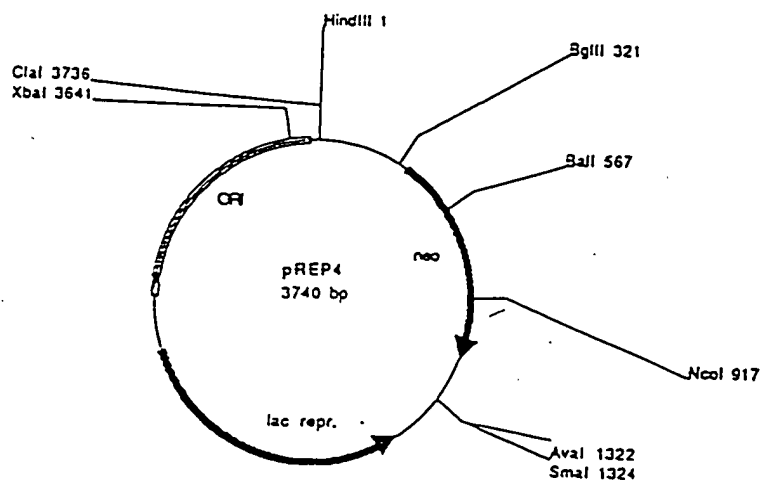


FIGURE 8



Xho I
 1 CTGAGAAAT CATAAAAAAT TTATTTGCTT TGTGAGCGGA TAACAATTAT
 TATA-Box
 operator I
 51 AATAGATTCA ATTGTGAGCG GATAACAATT TCACACAGAA TTCATTAAAG
 +1 start mRNA
 operator II
 Eco RI
 101 AGGAGAAATT AACTATGAGA GGATCGCATC ACCATCACCA TCACGGATCC
 RBS/SD 6xHis
 Bam HI
 151 GCATGCGAGC TCGGTACCCC GGGTCGACCT GCAGCCAAGC TTAATTAGCT
 Sph I Sac I Kpn I Sma I Sal I Pst I Hind III
 Stop 123
 201 GAGCTTGGAC TCCTGTTGAT AGATCCAGTA ATGACCTCAG AACTCCATCT

SEQ ID NO:25

FIGURE 9